REMARKS

Claim Rejections – 35 USC § 103

With regard to para. 3 of the Office Action, it is confirmed that the Examiner is correct is assuming that the subject matter of all the claims is commonly owned by the co-inventors.

The Office has quoted the statute from 35 USC 103(a), which is referenced herein. The Office has rejected claim 1-4 as being unpatentable over Feldon (US 2002/0173712 A1) in view of Eide (US 7,559,898 B2). Applicant has carefully considered the Office rejections and respectfully submits that the amended claims, as supported by the arguments herein, are distinguishable from the cited reference.

Feldon discloses an applanation tonometer comprising an applanator configured to calculate an intraocular pressure of the eye using one or more pairs of measured force and applanated area. The tonometer calculates the intraocular pressure using a predetermined relationship between interocular pressure and the slope of the line defined by data relating to the forces required to applanate the eye and the geometry of applanated portions of the eye.

It thus emerges that Feldon measures intraocular pressure of the eye when the eye is planar (i.e. flat). This is specifically noted by Feldon, who states:

> [0004] The second method for obtaining an indirect measurement of intraocular pressure is the applanation technique, wherein a portion of the cornea is flattened by a mechanical device.

Likewise, it is stated in para. 0007:

> [0007] In one embodiment, an applanation tonometer for flattening the cornea of an eye is provided …

This is the very ***opposite*** of the present invention, which measures intraocular pressure of the eye when the eye is in a non-flattened configuration. The independent claims have been amended to recite:

> guiding by total internal reflection through the light collecting and delivering device light reflected from the body to a detector when the body is in a non-flattened configuration, the light when the body is in a flattened configuration being reflected into the lumen and prevented from reaching the detector

Thus, the claims specifically recite that light reflected from the body is delivered to the detector only when the body is not flat. Feldon thus teaches away from the invention as now claimed.

No new matter has been introduced by this limitation, which is described on page 9, lines 4-20 (as originally filed):

> The intensity of received reflected light is **maximal**, as indicated by segment 102, **which corresponds to reflection from the undistorted cornea 44**. The larger volume of the lumen of tube 50 and the diversion of the compressed air as it passes the aperture cause a pressure rise at the cornea surface to lag behind in time with respect to the pressure rise at the measuring point. Therefore the cornea 44 maintains its undistorted curvature as the pressure values rise at the measuring point. **Flattening of the cornea starts a while after the pneumatic pulse is initiated** and similarly the cornea 44 resumes its original curvature somewhat before the pressure change is nullified. The cornea 44 is flattened at point 104 of plot 100 in which the intensity is zeroed. The cornea 44 is illuminated with a narrow illuminating beam 60 emitted from lumen 50. A convex surface of the undistorted cornea 44 implies a larger effective area, which reflects light back towards face 52. **A planar surface has smaller effective area, which reflects this illuminating beam 60 toward face 52 of LPCT 48, and therefore correlates with a lower light intensity reflected. When a certain threshold of**

low reflection intensity is reached, a zero reflectance value is assigned and any lower light intensity reflected is interpreted as zero, even as the cornea 44 assumes a concave structure.

Insodar as Eide relates to tonometry, he likewise relates to applanation tonometry, as clearly stated in the Summary to which the Examiner refers on page 4 of the Office Action:

> The most well-known principle of non-invasive pressure monitoring uses the principles of *applanation* tonometry. For example, *applanation* tonometry is used for monitoring of fontanel pressure in infants, and ocular pressure and arterial blood pressure.

Further reference to tonometry in Eide is likewise directed to *applanation* tonometry:

> Though the sensor device itself is not a part of the invention, nor a method by which such a sensor device is used on an animal or human body cavity, some examples are given to illustrate the concept, though this represents no limitation of the scope of the invention. First, *applanation* tonometry are widely used for non-invasive pressure measurement. Pressure gradients exist across the walls of a pressurised elastic sphere. When a pressure sensor is applied to the surface of the flattened area, no pressure gradient exists over the flattened portion. Pressure measurements can be made when a constant pressure is applied to the flattened area. *Applanation* tonometry may for example be used in non-invasive blood pressure monitoring, monitoring of ocular pressure (i.e. pressure within the ocular bulb), and even monitoring fontanel pressure in infants with an open fontanel. The pressure sensor 46 consists of the pressure element that is in contact with the skill or eye bulb. Signals from the sensor 46 are converted within the pressure transducer 47. When pressures are measured using the principles of *applanation* tonometry, it is well known that the pressure pulsation's detected by the tonometer depend on the pressure by which the tonometer is applied to the measurement surface. With increasing pressure from the tonometer, pressure waves increase until the waves with highest amplitudes are recorded. The pressure by which the

> *applanation* tonometry is applied to the surface determines quality of signal detection. Therefore, devices for *applanation* tonometry may include a sensor-regulating device 48, which controls the pressure by which the tonometer is applied to the surface. [Col. 36, lines 1*ff*]

Given that Eide relates only to applanation tonometry and makes no suggestion to measure pressure when the cornea is not flat, there is no way to combine Feldon and Eide to provide the limitations of the independent claims. Furthermore, there is no way that Feldon or Eide could be modified to operate according to the invention without operating in the very opposite manner to which they are both inherently designed. Consequently, as is well established, there can be no motivation to modify Feldon or Eide since the very act of doing so would cause them to operate against the manner in which they are both intended to operate.

It is therefore respectfully submitted that the independent claims are allowable over Feldon or Eide both singly and in combination.

The remaining claims are likewise believed to be allowable if only by virtue of their being dependent on allowable base claims.

Favorable reconsideration and allowance are accordingly requested.

Applicant believes the above amendments and remarks to be fully responsive to the Office Action, thereby placing this application in condition for allowance. No new matter is added. Applicant requests speedy reconsideration, and further requests that Examiner contact its attorney by telephone, facsimile, or email for quickest resolution, if there are any remaining issues.

Respectfully submitted,

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